APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,724	11/16/2000	Franck Barilland	AUS9-2000-0483-US1	9479

7590 03/15/2004	EXAMINER
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ART UNIT	PAPER NUMBER
2143	3

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/714,724	FRANCK BARILLAND
	Examiner	Art Unit	
	mitra kianersi	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _03_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *2*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

Claims 1-36 have been examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 13-23 and 25-35 are rejected under 35 U.S.C. 102(b) as being

anticipated by Gehr et al. (US Patent 5,828,847)

1.   As per claims 1,13 and 25, a method, an apparatus and a computer program

product of balancing a workload across a plurality of servers, the method comprising

the steps of:

responsive to a request from a requesting client for a distributed service, forwarding

the request to a first distributed service manager associated with the requesting client;

determining whether the first distributed service manager has information about the

distributed service; (corresponds to the dynamic server switching system maintaining a

list in each client which identifies the primary server for that client, abstract)

if the first distributed service manager has information about the distributed service,

retrieving the information about the distributed service, (corresponds to the event that

the client does not have requests served by the designated primary server or the

designated communication method, the system traverses the list to ascertain the

identity of the first available alternate server-communication method pair. Abstract) and

(this routing information functions to load balance on a per client basis since each

client has its own routing list. Col 4, lines 22-25)

if the first distributed service manager does not have information about the distributed service, retrieving information about the distributed service from a second distributed service manager and caching the retrieved information at the first distributed service manager; and sending the retrieved information to the requesting client. (Client-Server System Philosophy, in the event that the client does not have requests served by the designated primary server or the designated communication method, then traverses the list to ascertain the identity of the first available alternative server-communication path pair, col 4,lines 58-66) and (see Fig 5.a and Fig 5.b)

2.   As per claim 2, the method wherein the first distributed service manager has information about at least two sources for the distributed service and selects a source which will provide best service to the requesting client based on network performance metrics. (Load balancing is the practice of splitting communication into two or more routes. By balancing the traffic on each route, communication is made faster and more reliable. Load balance is not related to the absolute level of load, but only to how well the existing load is distributed. See also Fig 5.a and Fig 5.b)

3.   As per claims 3, 15 and 27, a method, an apparatus and a computer program product of balancing demand for networked services in a distributed data processing system, the method comprising the steps of:
initializing one or more local service managers within the distributed data processing system, wherein each local service manager provides access to networked services for clients within the distributed data processing system, and wherein each client is uniquely associated with a local service manager, initializing one or more distributed service managers within the distributed data processing system, wherein each distributed service manager provides access to networked services to local service managers within the distributed data processing System, and wherein each local service manager is uniquely associated with a distributed service manager; receiving, at a distributed service manager, a request for a networked service from a local service manager; determining whether the distributed service manager has information about a networked service with one or more characteristics that match one

or more parameters in the request for a networked service; and returning information about a matched networked service from the distributed service manager to the local service manager. (Corresponds to the dynamic server switching system maintaining a list in each client which identifies the primary server for that client, and to the event that the client does not have requests served by the designated primary server or the designated communication method, the system traverses the list to ascertain the identity of the first available alternate server-communication method pair. Abstract) and (Client-Server System Philosophy, col 4, lines 58-66) and (see Fig 5.a and Fig 5.b)

4.   As per claim 4, the method further comprising: sending a request for a networked service from a requesting client to a local service manager associated with the requesting client; and

returning information about a matching networked service from the local service manager to the requesting client, wherein the matching networked service has characteristics that match parameters in the request for a networked service. (corresponds to the data generated as a result of the server actions are then returned to the requesting client. It should be noted that a server S1-S4 could be self-serving, in that it can also function as a client for some service requests, col 4, lines 1-11)

5.   As per claim 5, the method further comprising: receiving a request for a networked service at a local service manager; and determining whether the local service manager has information about a networked service with characteristics that match parameters in the request for a networked service. (Corresponding entries are included in this data which designate preferred communication methods between client-server pairs, col 4, lines 18-20)

6.   As per claim 6, the method further comprising:

if the local service manager has information about a matching networked service, returning the information about the matching networked service to the requesting client;

if the local service manager does not have information about a matching networked service, forwarding the request for a networked service from the local service manager to a distributed service manager associated with the local service manager. (Client-

Server System Philosophy, in the event that the client does not have requests served by the designated primary server or the designated communication method, then traverses the list to ascertain the identity of the first available alternative server-communication path pair, col 4, lines 58-66) and (see Fig 5.a and Fig 5.b)

7.   As per claim 7, the method further comprising: if the distributed service manager has information about a matching networked service, returning the information about the matching networked service to the local service manager; if the distributed service manager does not have information about a matching networked service, broadcasting the request for a networked service from the distributed service manager to all distributed service managers in the distributed data processing system, receiving information about one or more matching networked services at the distributed service manager in response to the broadcast request; and caching the received information about one or more matching networked services at the distributed service manager. (Corresponds to the dynamic server switching system maintaining a list in each client which identifies the primary server for that client, Abstract) and (Corresponds to the event that the client does not have requests served by the designated primary server or the designated communication method, the system traverses the list to ascertain the identity of the first available alternate server-communication method pair. Abstract) and (this routing information functions to load balance on a per client basis since each client has its own routing list. Col 4, lines 22-25) (Client-Server System Philosophy, in the event that the client does not have requests served by the designated primary server or the designated communication method, then traverses the list to ascertain the identity of the first available alternative server-communication path pair, col 4, lines 58-66) and (See Fig 5.a and Fig 5.b)

8.   As per claim 8, the method further comprising: in response to a determination that the distributed service manager has information about two or more matching networked services, selecting a single networked service at the distributed service manager. (the client reestablishes the originally selected primary server-communication method pair as the request route for newly generated requests while processing existing

requests via the alternate server which received these requests, col 4, line 67, and col 5, lines 1-5)

9.   As per claim 9, the method further comprising:
performing a load balancing operation at the distributed service manager to select the single networked service. (the client reestablishes the originally selected primary server-communication method pair as the request route. Since each client has its own list, the load presented to each of the servers can be balanced across the available servers. Col 11, lines 38-41)

10.   As per claim 10, the method further comprising:
comparing network-related metrics during the load balancing operation. (the client reestablishes the originally selected primary server-communication method pair as the request route for newly generated requests while processing existing requests via the alternate server which received these requests. (col 4, line 67, and col 5, lines 1-5)

11.   As per claims 11, the method further comprising:
comparing one or more of network- related metrics associated with a network path between a requesting client and a providing server. (corresponds to the dynamic server switching system avoids system bottlenecks and maintains a rapid exchange of communication between client and server so that the client processes obtain the benefit of the rapid data retrieval capability of the automated cartridge library system, col 11, lines 19-23)

12.   Claims 14 and 26 recite the same limitations as claim 2. Therefore, they are analyzed and rejected by the same rationale.

13.   Claims 16-23 and claims 28-35 recite the same limitations as claim 4-11. Therefore, they are analyzed and rejected by the same rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 12, 24 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gehr et al. (US Patent 5,828,847) and further in view of Kadansky et al. (US Patent

No. 6,507,562)

14.   As per claims 12, 24 and 36, Gehr et al. do not explicitly disclose the method

wherein the network related metrics are selected from a group comprising:

bottleneck-link speed, round-trip time, and hop count. However, Kadansky et al.

Disclose static network with the maximum possible transmission rate, by the bottleneck

bandwidth (col 33, 10-16), Round trip time (RTT) computations, col 44, lines 45 and

measuring by hop count. (col 16, lines 4-5). Therefore, it would have been obvious to

one of ordinary skill in the art at the time of the invention was made to incorporate

Gehr's idea of maximum server availability and load balancing with network related

metric group within Kadansky's configuration in order to improve service, ensure high

availability, enable load balancing and gracefully respond to faults, overloads and

delays.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mitra Kianersi whose telephone number is (703) 305-4650. The examiner can normally be reached on 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mitra Kianersi
03/04/2004

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